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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/036,105

10/17/2001

Roger L. Schultz

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4527

7590

12/16/2005

ROBERT GROOVER  
GROOVER & HOLMES  
P O BOX 802889  
DALLAS, TX 75380

EXAMINER

COLLINS, GIOVANNA M

ART UNIT

PAPER NUMBER

3672

DATE MAILED: 12/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/036,105

Applicant(s)

SCHULTZ ET AL.

Examiner

Giovanna M. Collins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-13 is/are allowed.
- 6) ☒ Claim(s) 14 and 16-18 is/are rejected.
- 7) ☒ Claim(s) 15 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 14 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Evans (4,346,591).

Evans discloses a method of operating a drill rig comprising using downhole circuitry to signal a change in downhole sensors by causing a reduction in drilling fluid long time average pressure (see col. 1, lines 48-55).

Referring to claim 17, Evans discloses downhole sensors (col.1 ,lines 48-55).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Evans '591 in view of Scherbatskoy ('680).

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Evans discloses the method of claim 14 and that various devices can be connected to the sensors to convey the signal from the sensors (col. 1, lines 48-51\_ but does not disclose the pressure change is caused by cycling a valve. Scherbatskoy teaches it is well known in the art to cycle a valve to reduce fluid pressure through a position that restores fluid flow to its normal state (see col. see col. 2, lines 4-20). As one of ordinary skill in the art would be familiar with cycling a valve in response to a sensor reading, it would be obvious to one of ordinary skill in the art to modify the method disclosed by Evans to have the pressure variation caused by cycling a valve to reduce fluid pressure through a position then restores fluid flow to its normal state as taught by Scherbatskoy.

3. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Evans '591 in view of Randall et al. ('037).

Evans discloses the method of claim 14 but does not disclose that an adaptive filter analyzes the data from the sensor. Randall teaches that adaptive filter improves the quality of the data from a sensor by reducing noise (see col. 4, line 60-col. 5, line 4). As it would be advantageous to improve the quality of the data from the sensor and to reduce any noise, it would be obvious to modify Evans in view of Randall.

***Allowable Subject Matter***

Claims 1-13 are allowed.

Claims 15 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Response to Arguments***

4. Applicant's arguments filed August 17, 2005 have been fully considered but they are not persuasive.

Referring to the argument concerning the Evans reference, the applicant states the Evans reefing does not disclose the use of the long time average pressure. In the applicants arguments dated October 27, 2006, the applicant states on page 8, the last sentence in the last paragraph and continuing on page 9, the sleeve can be opened and closed repeated to cause low and high pressure pump levels at the surface which would decrease the long term average pressure. The Evans reference also discloses the pump levels at the surface can have high and low levels (col. 1, lines 48-55), which according to the applicants definition would also have the effect of lowering the long term average pressure.

Referring to the arguments concerning the Randall reference, the applicant states the applicant's adaptive filter is capable of using downhole circuitry to signal a change in the downhole conditions and the adaptive filter in the Randall reference takes no further action. In claim 18, the applicant only recites "the downhole equipment condition is determine by an adaptive filter that analyzes in the data". The applicant does not state the filter signals any changes.

The applicant states the sensor found in Randall is designed to process filter data prior to the analysis of data and the adaptive filter will actually get rid of points. The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

The Randall reference was used merely for its general teaching on adaptive filters to help reduce noise in the sensor signal (col. 5, lines 1-5). As it would be advantageous to improve the quality of the data from the sensor by reducing any noise, it would be obvious to modify Evans in view of Randall. The applicant also states some embodiments use ration or energy or power to make their predictions or estimations. However, these features are not recited in the claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Giovanna M. Collins whose telephone number is 571-272-7027. The examiner can normally be reached on 6:30-3 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
gmc

  
**David Bagnell**  
**Supervisory Patent Examiner**  
**Technology Center 3670**